REMARKS

REJECTIONS UNDER 35 U.S.C. § 112

The Examiner has rejected claim 7, under 35 U.S.C. § 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as the invention. Specifically, the Examiner contends that there is no antecedent basis for "the ... processing agent." Claim 7 has been amended per the Examiner's suggestion.

REJECTIONS UNDER 35 U.S.C. § 102

The Examiner has rejected claim 19 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103 (a) as obvious over Japan '642 (JP 3-281642).

Claim 19 has been cancelled without prejudice or disclaimer and therefore the Examiner's rejection thereof has been rendered moot.

REJECTIONS UNDER 35 U.S.C. § 103

The Examiner has rejected claims 1-7, 9-11, and 16-20 under 35 U.S.C. 103(a) as being unpatentable over Japan '357 (JP61-130357) and Baranwal (U.S. Pat. No. 3,824,206). The Examiner's position can be summarized by the following statements:

> As to claims 1 and 20, it would have been obvious to one of ordinary skill in the art to (a) mix Japan '357's processing aid with rubber in the form of cement (rubber and solvent) or latex (rubber and water), (b) remove the solvent or water from the modified cement or latex to form a premix and then (c) mix the premix with carbon black since.
>
> (1) Japan '357, directed to making a vulcanizable rubber composition, suggests mixing the processing aid with rubber and then mixing with carbon black form a vulcanizable composition; and
>
> (2) it is well known, as evidenced by Baranwal et al (see col. 2 lines 7-26), to facilitate mixing of rubber with vulcanizing materials by (a) mixing an ingredient (e.g. oil and rubber) in liquid form as a latex or a solution to make a modified cement or latex, (b) converting the modified cement or latex to solid raw rubber/raw rubber containing oil ("premix") by coagulation if it is a latex or by evaporation if it is a solvent and then (c) mixing the premix with another ingredients such as carbon black. Hence, the basic process of a first step of adding, a second step of isolating and a third step of mixing is disclosed by Baranwal et. al Japan '357 motivates one of ordinary skill in the art to add a processing aid in the first step to obtain the benefit of uniform carbon black dispersion[1]

Reconsideration is respectfully requested. Applicants maintain the Examiner has not

established a *prima facie* case of obviousness by combining Japan '357 and Baranwal. First, there is no suggestion to combine the references. In fact, Baranwal's teaching motivates against the combination. And, combining the overall teachings of the references falls short of the claimed invention; only through hindsight selection could one pick and choose from the teachings of the references and arrive at the claim invention.

Applicants acknowledge that Japan '357 teaches "by adding the rubber processing aid to rubber in advance or together with a filler, dispersion of the filler in the rubber proceeds with ease . . ." The only evidence provided by the Examiner is that this teaching is within the context of conventional rubber mixing, which occurs in the solid state. Applicants maintain that it would be an impermissible "leap" to conclude that this teaching somehow suggests that one could or should add processing aid to the cement and then subsequently solid-state mix carbon black.

Applicants also acknowledge that Baranwal teaches the addition of "rubber compounding ingredients" to liquid state rubber (*i.e.,* solution state or latex rubber composition). Baranwal specifically teaches adding ALL of these ingredients in the liquid state:

> The principal procedural requirements are to add all ingredients, other than the rubber, to the rubber while the rubber is in a liquid condition, as a latex or solution, and to perform essentially all of the mixing by stirring all other ingredients into the liquid solution or suspension so as to avoid material breakdown of the molecular structure, followed by conversion to solid rubber, and shaping to its ultimate configuration with essentially no further mixing and preferably only the degree of deformation and working required for imparting the necessary shape to the rubber to produce the intended finishes article.[2]

In other words, Baranwal does not teach mixing certain ingredients in the liquid state followed by mixing certain ingredients in the solid state, which is defined in the current claims. Moreover, Baranwal's intent is to avoid any solid-state mixing. As a result, Baranwal allegedly achieves an improved rubber vulcanizate:

> When a synthetic rubber of the kind specified above is compounded in a liquid condition with a large quantity of oil and a suitable portion of carbon black based on the sum of rubber and oil, along with the usual vulcanizing and protective materials, and is shaped to the form of a tire tread without further mixing, followed by vulcanization, a number of surprising benefits are observed.[3]

In fact, Baranwal teaches against any solid-state mixing:

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[1] See Office Action dated September 16, 2004, pages 4-5.
[2] See U.S. Pat NO. 3,824,206, column 3, lines 16-26
[3] Column 5, lines 57-63

> If the compositions of this invention, prepared as described above by wet mixing, are further mechanically mixed in a dry state, these benefits are rapidly lost. Only a few passes through an ordinary 2-roll mixing mill adjust for a mixing operation, such as for mixing vulcanizing ingredients into a rubber-oil-black masterbatch, noticeably degrade the material, so that after a thorough dry mixing its properties are no better than if it had been entirely prepared by dry mixing.[4]

Accordingly, there is no suggestion or motivation to combine the references. The only motivation is against the combination since Baranwal teaches against solid-state mixing; therefore there is no reason why one skilled is the art would combine it with Japan '357, which teaches solid-state mixing.

With respect to the Examiner's rejections of the dependent claims, reconsideration is also requested. Applicants maintain that the additional recitation provided by the dependent claims are not taught or suggested by the cited references. In addition, because the rejected dependent claims depend from Claim 1, which Applicants maintain are allowable, favorable consideration of the dependent claims is likewise sought.

The Examiner has rejected claim 8 under 35 U.S.C. § 103(a) as unpatentable over Japan '357 and Baranwal in view of page 11, lines 6-9.

Applicants maintain that there is no motivation to combine the cited references. Even if combined, the references do not teach all of the elements recited in claim 8. Further, claim 8 depends from claim 1, which Applicants maintain is allowable. Reconsideration is therefore respectfully requested.

The Examiner has rejected claims 12-15 under 35 U.S.C. § 103(a) as being unpatentable over Japan '357 and Baranwal in view of Lawson et al. (U.S. Patent No. 5,332,810).

Applicants maintain that there is no motivation to combine the cited references. Even if combined, the references do not teach all of the elements recited in claims 12-15. Further, claims 12-15 depend from claim 1, which Applicants maintain is allowable. Reconsideration is therefore respectfully requested.

CONCLUSION

The mere fact it is known to mix rubber, carbon black, and oil (or ALL compounding ingredients as taught by Baranwal) via "liquid-state" mixing doses not

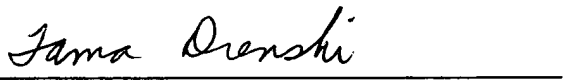
[4] See Column 6, lines 8-16

teach, suggest, or motivate one skilled in the art to "liquid-state" mix rubber and dispersing aid, and the subsequently "solid-sate" mix the rubber with carbon black. Also, the mere fact that prior art suggests mixing sundry ingredients with rubber via " liquid-state" mixing does not suggest "liquid-state" mixing dispersing aid with rubber and then subsequently "solid-state" mixing carbon black.

In view of the foregoing amendments and arguments presented herein, the Applicants believe that they have properly set forth the invention and accordingly, respectfully request the Examiner to reconsider the rejections provided in the last Office Action. A formal Notice of Allowance of claims 1-18 and 20 is earnestly solicited. Should the Examiner care to discuss any of the foregoing in greater detail, the undersigned attorney would welcome a telephone call.

No new claims have been added and therefore no additional fees are believed due at this time. Nonetheless, in the event that a fee required for the filing of this document is missing or insufficient, the undersigned attorney hereby authorizes the Commissioner to charge payment of any fees associated with this communication or to credit any overpayment to Deposit Account No. 06-0925.

Respectfully submitted,



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